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ABSTRACT

Thirty-two states now have some form of accountability legislation that requires the reporting of school and school system performance indicators. This study examined the Alabama State Report Card to determine whether its information is sufficient to inform the public, legislature, and the media about the achievement of each school and school district as the state's Education Accountability Plan has mandated. In addition to the 14 report card variables for 1996, the analysis added 14 financial indicators, an indicator for dropouts, and 1 for the percentage of district enrollment by race. The relationships between indicators, student achievement, and grade ratings for all 127 Alabama districts were studied. Analyses demonstrated that the state Superintendent's Report Card, 1996, shows that there are differences in the populations being served by the various school districts. It does not stand as an instrument for public reporting on the quality of teaching and learning. Nor does it speak to educational policy at any but the most macro level. Findings indicate that the use of additional demographic indicator variables, not included in the Report Card, provide valuable information about school district grade definition status. These additional indicators more clearly describe the relationship between the demographic profile of each district and grade definition, and they are significant predictors of grade definition levels. (Contains one table and eight references.) (SLD)

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The Alabama Superintendent's Report Card: An Analysis of Local Education Agency Characteristics and Success at Meeting State Defined Performance Measures

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The Alabama Superintendent's Report Card: An Analysis of Local Education Agency Characteristics and Success at Meeting State Defined Performance Measures

Introduction

State defined performance indicators for education are rapidly becoming the hallmark of the 1990s. As of 1996, 52 of 54 state education agencies had at least one annual accountability or indicator report (Council of Chief State School Officers, 1996). Thirty-two states now have some form of accountability legislation enacted that require the reporting of school and school system performance indicators. Most of the analysis and literature on the development of state-defined performance indicators describe a pattern of implementation with little prior conceptual development. Inter-school or school district ratings and comparisons are central to much of this legislation and focus, most often, on student performance measures and school finance data. These type of indicators provide more information on school and school system need than they do on the quality of education that is provided. The challenge in developing accountability legislation is to define assessment strategies and performance indicators that support reforming school practice and assure access to educational outcomes. Are these measures to be used for reinvention and renewal, or intervention?

Student and school indicators have become additional points of focus in accountability efforts and legislative mandates. The Council of Chief State

School Officers (CCSSO) State Education Policies Reports have attempted to provide state-by-state information on policies relating to time of attendance, content standards, high school graduation requirements, and teacher licensure. In addition, the CCSSO has assisted states in developing performance indicators at the district and school levels. Research on issues related to state-mandated accountability efforts is increasing. A major challenge for researchers is defining a context for the use of indicators that supports the planning and management of schools toward the end of increased teaching and learning. Odden (1990) argues that indicators by themselves cannot provide policy relevant information in support of strengthening educational processes unless used within the context of a strong conceptual framework. One such framework, defined in terms of educational inputs, educational processes and educational outcomes, was put forth by Shavelson, McDonnel & Oakes, (1989). In this major study for the Rand Corporation the authors concluded that performance indicators which support strengthening teaching and learning, and the publics right to information on the effectiveness of schools, meet the following eight criteria.

- They reflect core features of the educational system.
- They measure factors that policy can influence.
- They provide information to support decision making on current or potential problems.
- They measure observed behavior rather than perceptions.
- Use valid and reliable measures.

- Use data that can be collected.
- Provide analytical linkages among indicators.
- Address a broad range of audiences.

Section 16-6B-7 of the Education Accountability plan for the State of Alabama, adopted July 7, 1995, outlines that the State Board of Education (Alabama Code, 1995) will report annually to the public for each school and area. The legislation calls in general terms for reporting in three areas: a funding and expenditures report; a student achievement report ; and a school safety and discipline report. This legislation has been translated by the State Education Agency (SEA) into the Alabama State Superintendent's Report Card (1996). This document provides data on 14 performance indicators that define some measure of accountability for the 128 local education agencies (LEA) in the Alabama system. The report card was published for the first time following the 1995-96 academic year.

In its first iteration, the SEA attempted to use report card to describe and characterize school district financial, enrollment, and teacher certification level and to link these with the student achievement of each school district in the state. The school district report card contained 14 indicators in the following categories: (a) Stanford Achievement Tests, (b) system OLSAT, (c) ACT test scores, (d) high school exit exam scores, (e) writing test scores, (f) enrollment, (g) attendance, (h) per pupil expenditure in ADA, (i) free and reduced lunch eligibility, and (j) professional certification, (k) state, local, and federal revenues, and (l) mills equivalent.

Included in the Alabama State Superintendent's Report Card for each LEA was a letter grade score for select measures. For the 1996 Report Card, there was no conceptual framework that defined the quality of the LEA's efforts to accomplish teaching and learning, given the attributes of the student population. The current study was conducted to determine if a conceptual framework for school district performance could be developed using the information provided in the Alabama LEA level report card. For purposes of analysis, 17 additional indicator variables were taken from the State Superintendent's Statistical and Financial Data and added to the Report Card indicators. The additional indicators include (a) 14 financial indicators, (b) dropouts, and (c) percentage of district enrollment by race.

The Problem

Interpretation of the information in the Report Card by the public is an important consideration in publishing and disseminating the document statewide. Is the information in the 1995-96 Alabama Report Card sufficient to inform the public, legislature and media about the achievement of each school and school district as was intended by the Education Accountability Plan (Alabama Code, 1995).

Purpose of the Study

The **purpose** of this study was to analyze the indicators in the 1996 Alabama Report Card (State of Alabama State Superintendent's Report Card, 1996) and determine the relationship between these indicators, student achievement, and grade ratings for all 127 school districts. Other indicators were obtained from the State Superintendents's Annual Statistical and Financial Data (1995).

The Research Questions

The basic research question addresses the need for information in the Report Card to "inform the public about student achievement in each school" as was intended of the Education Accountability Plan for accountability reports to the public (Alabama Code, 1995). The research questions for this study are: **(a) What are the descriptive profiles of Alabama school districts related to student achievement? and (2) What is the difference in computed school district grade definition levels based on demographic indicator variables and the achievement levels assigned to school districts by the Alabama State Department of Education?**

The Alabama Report Card

A school district Report Card has two categories of indicators and contains a total of 14 indicators. The first category is labeled achievement indicators with the following: (a) Stanford Achievement Tests, (b) system OLSAT, and (c) ACT test scores. The second category is labeled other indicators and lists the following: (a) high school exit exam scores, (b) writing test scores, (c) enrollment, (d) attendance, (e) per pupil expenditure in ADA, (f) free and reduced lunch eligibility, (g)

professional certification, (h) state, local, and federal revenues, and (i) mills equivalent. For purposes of analysis, 17 additional indicator variables were taken from the State Superintendent's Statistical and Financial Data (Alabama State Department of Education, 1995) and added to the Report Card indicators. The additional indicators include (a) 14 financial indicators, (b) dropouts, and (c) percentage of district enrollment by race.

Student Achievement Assessment Scheme for the 1996 Report Card

Grading Definition Assigned to School Districts Representing Overall Achievement

A	Superior	Percentile rank of 70 or above
A-	Excellent	66 to 69
B+	Outstanding	62-65
B	Very Good	58-61
B-	Good	54-57
C+	High Average	48-53
C	Average	40-47
C-	Moderate Caution	35-39
D+	Caution	31-34
D	Caution	27-30
D-	Extreme Caution	23-26
F	Failing	22 and below

Mills Equivalent
(Local Effort)

Good	Above 40 mills
Fair	30 to 40 mills
Poor	Below 30 mills

Stanford Achievement Test Grade Definition
(SAT 9 Percentile Ranking Scores)

A	70 and above	C	40 to 47
A-	66 to 69	C-	35 to 39
B+	62 to 65	D+	31 to 34
B	58 to 61	D	27 to 30
B-	54 to 57	D-	23 to 26
C+	48 to 53	F	22 and below

5TH- AND 7TH-Grade Writing Test
Level of Proficiency

Level IV: Superior Performance beyond Level III Course or Grade level mastery.
Level 111: Solid Academic Performance at Course or Grade Level
Level 11: Partial Mastery of Knowledge and Skills Fundamental for Work at Course or Grade Level

Level I: Minimal Grasp of Knowledge and Skills Fundamental for Work at Course or Grade Level

High School Basic Skills Exit Exam Grade Definition: (Percent Passing Reading, Language, and Math)

A	96 to 100
B+	93 to 95
B	90 to 92
C+	87 to 89
C	83 to 86
C-	79 to 82
D	75 to 78
D-	70 to 74
F	Below 70

Operational Definitions

Grade Definition: Letter grades, A through F, assigned by the Alabama State Department of Education indicating the achievement level of school districts based on SAT (9) achievement test scores scaled by percentile rank.

Average Daily Attendance (ADA): The aggregate attendance of a school during a reporting period divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers are considered as days in session. The average daily attendance for groups of schools having varying lengths of terms is the sum of the average daily attendance obtained for the individual schools. State average in ADA is 96. 1%.

Current Expenditures Per Child in ADA: The expenditures for operating local public schools. excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel. fixed charges. student transportation, school books
and materials, and energy costs. These items are divided by the ADA. State average is 54.458. Southern Regional Education Board stalest average is 55.220.

Stanford Achievement Test (SAT 9) Scores: Nationally normed achievement test comparing performance in reading, mathematics, language. science and social science to other students in the nation: national average is the 50th percentile.

Otis-Lennon School Ability Test (OLSAT): A test measuring school ability (verbal and quantitative) compared to other students in the
nation in the same grade; national average is the 50th percentile.

High School Basic Skills Exit Exam: The percentage of I 11th grade students who passed each section of the Exit Exam on their first attempt. The state average is 86% for reading. 82%~ for mathematics, 78% for language.

American College Testing (ACT): This is the average ACT test score for students who took the test. The national average is 20.8. The state average is 20.0.

School Safety & Discipline: Standards will be developed for the 1996-97 school year.

Mills Equivalent: The total amount of revenue collected locally, minus insurance and tuition, for public school purposes divided by the value of one regular district mill of ad valorem tax. The state average is 36.1 mills equivalent.

Percent State Revenue: The percent of revenues from the state sources divided by the total state, local and federal revenues. The national average is 46%. The state average is 69.3%.

Percent Local Revenue: The percent of revenues from local sources divided by the total state, local and federal revenues. The national average is 46.7%. The state average is 19.3%.

Percent Federal Revenue: The percent of revenues from federal sources divided by the total state. Local and federal revenues. The national average is 7.2%. The state average is 11.3%.

Enrollment: The number of students on attendance roll as of the 40th day of school opening.

Professional Certificates: Issued based on the completion of approved programs and other requirements at the following levels: Class B (bachelor's degree level), Class A (master's degree level) and Class AA (sixth-year level).

6th- and 7th-Grade Writing Test: A direct assessment of writing which determines the level of proficiency. The highest level being Level IV and lowest level being Level 1. The assigned proficiency level is based on the level where the largest portion of the students scored.

State Revenue in ADA : Revenue from state sources in dollars per student average daily attendance.

Local Revenue in ADA : Revenue from local sources in dollars per student average daily attendance.

Federal Revenue in ADA: Revenue from federal sources in dollars per student average daily attendance.

Instructional Expenditure in ADA: Instructional expenditures per student in average daily attendance.

Percent of Students Eligible for Free/reduced Lunch: Percent of student enrollment eligible under federal guidelines for free or reduced lunch.

Percent Non-white Student Enrollment: Percent of students enrolled in the school district who are listed as minority race.

Percent White Student Enrollment: Percent of students enrolled in the school district who are listed as white race.

Methods

Research Design

A causal comparative research design was utilized. The population in this study consisted of all 127 public school districts in Alabama. Since the entire population of school districts in Alabama was used in the study, the results of the study are applicable only to school districts in Alabama for that particular school year. Data for this study on school district indicator variables and grade definition levels were obtained from school district Alabama Report Cards (1996). Report Card data were obtained from the Alabama State Department of Education and was in electronic format on 3.5 inch computer diskettes. Additional hard copy data were collected from the Superintendent's Annual Statistical and Financial Report (1995).

Analysis

For Research Question 1, means and frequency distributions were computed to provide a descriptive profile of school districts in the 1996 Alabama Report Card. For Research Question 2, discriminant analysis was employed to determine the computed school district student achievement grade definition using school district variables that described the school districts within the context of their demographic profile. The discriminant analysis compared the computed levels of grade definition using demographic profile indicators with the student achievement grade definition

assigned by the Alabama State Department of Education based on SAT (9) standardized test scores. The results of these analyses are discussed in the findings of this study.

Findings

Descriptive Profile

This section contains a descriptive profile of indicators summarizing each indicator variable (See Table 1, Appendix A). The indicator variables presented in this section are: (a) SAT9 grade definition, (b) state revenue in ADA, (c) local revenue in ADA, (d) federal revenue in ADA, (e) expenditure per pupil in ADA , (f) instructional expenditure in ADA, (g) local district mills of revenue, (h) percent of students eligible for free/reduced lunch, (I) percent non-white student enrollment, and (j) percent white student enrollment.

Summary of Descriptive Analysis Based on Demographic Indicators

The mean values of the **state revenue in ADA, federal revenue in ADA, expenditure per pupil, percent eligible for free/reduced lunch, and percent of non-white student enrollment** indicators decreased as school district grade definition increased. The mean values of the **local revenue in ADA, local district mills of revenue, and percent of white student enrollment** increased as school district grade definition increased. Instructional expenditures appeared to be more equally distributed throughout the grade distribution range (See Table 1, Appendix A).

These descriptive statistics indicate that as the poverty of an LEA increases, as indicated by eligibility for a free or reduced lunch, the lower the grade on the Alabama State Superintendents Report Card. The same relationship holds for percentage of non-white students. The descriptive statistics imply a link between poverty, race and the State Superintendents measure for poorly performing school districts. As would be expected, these school districts are receiving a greater share of the state equalization funds and federal funds. Expenditure data shows evidence that the more poorly performing LEA's expend more per pupil, most likely with federal funds. However, instructional expenditures per ADA are fairly constant across all school districts . The only real anomaly was seen with the 10 highest scoring school districts. These LEA's spent more per ADA pupil and for instructional ADA than all the other 118 districts.

It seems clear that the State of Alabama State Superintendent's Report Card, 1996 demonstrates that there are differences in the populations being served by the various school districts. It does not stand as an instrument for public reporting on the quality of teaching and learning. Nor does it speak to policy at any but the most macro level.

Discriminant Analysis of Computed and Assigned Grade Definition Levels Based on Demographic Indicator Variables

The indicator variables presented in this section are: (a) grade definition, (b) state revenue in ADA, (c) local revenue in ADA, (d) federal revenue in ADA, (e) expenditure per pupil in ADA , (f) instructional expenditure in ADA, (g) local

district mills of revenue, (h) percent of students eligible for free/reduced lunch, (I) percent non-white student enrollment, and (j) percent white student enrollment. The indicators included in this procedure were to determine if any differences existed between computed school district student achievement grade definition and the student achievement grade definition assigned by the Alabama State Department of Education based on Report Card indicators and indicators from the Superintendent's Annual Statistical and Financial Report (1995). The dependent or grouping variable was school district grade definition. The structure coefficients shown in Table 2 indicate the relative importance of the independent variables in four discriminant functions calculated in the equation. When viewing the structure matrix, independent variables ordered by size of the correlation between the variables and the discriminant scores define the discriminant functions.

Four indicators met the minimum Wilks' Lambda criteria as discriminating variables that defined the discriminant functions (see Table 3). These four indicators were: (a) percent students eligible for free/reduced lunch, (b) percent white student enrollment, (c) federal revenues, and (c) instructional expenditures.

Table 2

Stepwise Discriminant Analysis: Structure Coefficients Between Independent Variables and Canonical Discriminant Functions

Variable	Discriminant Functions			
	1	2	3	4
Percent students eligible for free lunch	-.891[a]	.040	.209	.401
Percent non-white student enrollment	-.741[a]	-.527	-.395	.055
Percent white student enrollment	.736[a]	.536	-.410	-.051
Local revenues	.182	-.519[a]	-.244	.303
Mills equivalent	.056	-.363[a]	-.150	.014
Federal revenues	-.610	-.403	.642[a]	.228
Instructional expenditures in ada	.092	-.492	-.283	.818[a]
Expenditures per pupil in ada	.059	-.494	-.186	.741[a]
State revenues	-.101	-.005	.223	.606[a]

Note. Variables are ordered by the size of the correlation within each function.
[a]Denotes largest absolute correlation between each variable and any discriminant function.

Table 3

Summary of Stepwise Discriminant Analysis for Levels of Grade Definition: Wilks' Lambda of Independent Variables

	Variables in the equation		
Step	Variable entered	Wilks' Lambda	prob.
1	Percent students eligible for free/reduced lunch	.215	.000*
2	Percent white student enrollment	.154	.000*
3	Federal revenues	.117	.000*
4	Instructional expense.	.098	.000*

*$p < .05$

The results of the discriminant analysis, which employed the demographic indicator variables, indicated that approximately 53% (n=53) of the school districts were classified by discriminant analysis in grade definition levels different from grade definition levels assigned by the State Department of Education (see Table 4). Using the demographic indicator variables, the discriminant analysis classified approximately 47% of the school districts in the same levels as those assigned by the State Department of Education.

Table 4

Stepwise Discriminant Analysis: Classification Results of Grade Definition Using School District Indicators as Predictor Variables

SDE Grade Definition	n	Predicted level of grade definition and percent									
		2	3	4	5	6	7	8	9	10	11
2 (D)	4	3 (75.0%)	0	1 (25.0%)	0	0	0	0	0	0	0
3 (D+)	2	0	1 (50%)	1 (50.0%)	0	0	0	0	0	0	0
4 (C-)	8	1 (12.5%)	0	6 (75%)	1 (12.5%)	0	0	0	0	0	0
5 (C)	21	0	1 (4.8%)	2 (9.5%)	13 (61.9%)	5 (23.8%)	0	0	0	0	0
6 (C+)	27	0	0	0	5 (18.5%)	14 (51.9%)	2 (7.4%)	6 (22.2%)	0	0	0
7 (B-)	17	0	0	0	2 (11.8%)	4 (23.5%)	3 (17.6%)	8 (47.1%)	0	0	0
8 (B)	21	0	0	0	0	5 (23.8%)	4 (19.0%)	9 (42.9%)	2 (9.5%)	0	1 (4.8%)
9 (B+)	13	0	0	0	0	1 (7.7%)	2 (15.4%)	6 (42.2%)	2 (15.4%)	1 (7.7%)	1 (7.7%)
10 (A-)	4	0	0	0	0	0	0	1 (25.0%)	1 (25.0%)	1 (25.5%)	1 (25.%)
11 (A)	10	0	0	0	0	0	0	1 (10.0%)	1 (10.0%)	0	8 (80.0%)

Note. Approximately 47% of the districts were classified by discriminant analysis in the same levels as was assigned by the State Department of Education.
Numbers in parentheses ( ) represents percentage of school districts classified in predicted levels of grade definition.
No school districts were assigned to grade definition levels 0 (F = failure) or 1 (D- = extreme caution).

Summary of Analysis of Demographic Indicators Using Discriminant Analysis

Discriminant analysis was used to determine which demographic indicators were important predictor variables used to classify school districts into one of 11 grade definition levels. The discriminating variables that were defined by the discriminant analysis to classify school districts within one of 11 accreditation levels were (a) percent students eligible for free/reduced lunch, (b) percent white student enrollment, (c) federal revenues, and (c) instructional expenditures. Based on the discriminant analysis using the seven demographic indicator variables, 53 (53%) of the 127 school districts were classified in accreditation levels different from those assigned by the State Department of Education.

Conclusions and Recommendations

Conclusions

What are the descriptive profiles of Alabama school districts related to student achievement? The descriptive analysis in this study presented a clear, comparable picture of the relationship between grade definition levels and the indicators profiling the demographic context of school districts. Even though school districts assigned to caution levels of grade definition generated less local revenues than the districts assigned to good, outstanding, and excellent levels, state revenues appeared to have equalized the disparities in locally generated funds. The higher levels of expenditures per pupil in the lower grade definition districts can possibly be explained by the higher levels of federal revenues and higher percent of students eligible for free/reduced lunches. The 10 school districts assigned to the superior

level of grade definition spent approximately 400 dollars more per pupil on instruction than districts assigned to the lower levels of grade definition. However, there appears to be very little difference in the per pupil instructional expenditures for school districts assigned D through A-.

What is the difference in computed school district grade definition levels based on demographic indicator variables and the achievement levels assigned to school districts by the Alabama State Department of Education? It can be concluded that the Report Card, in its present format, does not discriminate well in assigning school districts to grade definition levels D through A on the systematic examination of the nine demographic profile indicator variables in this study.

The link between school district grade definition levels and the 1996 Alabama Report Card indicator variables appears tenuous when comparing the use of the SAT9 test scores versus the demographic profile indicators . Given the tenuous link between the grade definition levels and the Report Card the SAT9 scores versus the demographic indicator variables, the accreditation system and the Report Card format needs some rethinking or reexamination regarding the policy for assigning grade definitions to school districts.

Recommendations

The findings indicated that the use of the additional demographic indicator variables, not included in the Report Card, provided valuable information about school district grade definition status. These additional indicators more clearly described the relationship between the demographic profile of school districts and

grade definition; and, they were significant predictors of grade definition levels in the discriminant analysis. It can be recommended that further studies be conducted to determine how additional demographic indicator variables impact school district grade definition assignment.

Further studies should be conducted to determine why school districts in grade levels D through C- are not spending an equivalent per pupil expenditure on instruction compared to school districts in level A. Qualitative case studies of particular school districts are needed to determine how and why these school districts in grade definition levels D through C- are not successful and why school districts in grade definition levels C through A are successful. These are the why and how questions this study and the 1996 Alabama Report Card did not answer.

The 1996-97 Alabama Report Card: The Future for Accountability Reports

While the 1996 Alabama Report Card used only 14 variables to report the condition of education at the school district level, the 1997 report card (not yet published) will include school level data as well as district level data. The new 1997 report card will far exceed the 1996 report card with the information needed for analysis and policy decisions to improve education in Alabama schools. The Alabama State Department of Education (SDE) 1997 report card was developed through collaboration of numerous educators and community members around the state. In an effort to address low achievement, the SDE , through the 1995 Educational Accountability Plan, provides assistance programs for school districts with at-risk students. A minimum of $100 per student has been allocated to provide

tutorial assistance programs, after-school, Saturday school, and/or summer school to assist identified at-risk students, schools, and school districts in raising levels of achievement.

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Appendix A

Table 1. Means and Ns of Indicators by Grade Definition (SPSS Output)

Grade Def.	state revenue ada	local revenue ada	federal revenues ada	expenditure per pupil in ada	instructional exp ada	mills of revenue local district	percent eligible for free/reduced lunch	percent non-white students	percent white students
D Caution									
Mean	3462	582	1140	4675	2106	30.62	94	99.48	.52
N	4	4	4	4	4	4	4	4	4
Concerned									
D+ Caution									
Mean	3454	828	1024	4761	2270	49.47	79	86.86	13.15
N	2	2	2	2	2	2	2	2	2
Moderate									
C- Caution									
Mean	3335	788	776	4595	2228	34.39	78	87.40	12.60
N	8	8	8	8	8	8	8	8	8
C Average									
Mean	3321	634	676	4402	2187	25.01	64	58.25	41.75
N	21	21	21	21	21	21	21	21	21
High									
C+ Average									
Mean	3174	842	465	4134	2131	33.26	47	32.49	67.55
N	27	27	27	27	27	27	27	27	27
B- Good									
Mean	3238	743	471	4264	2172	36.25	43	21.47	77.84
N	17	17	17	17	17	17	17	17	17
B Very Good									
Mean	3099	1203	452	4303	2180	40.62	39	21.27	79.16
N	21	21	21	21	21	21	21	21	21
B+ Outstanding									
Mean	3149	1098	399	4298	2228	42.92	34	19.21	80.79
N	13	13	13	13	13	13	13	13	13
A- Excellent									
Mean	3056	932	273	4056	2167	49.48	23	11.92	88.09
N	4	4	4	4	4	4	4	4	4
A Superior									
Mean	3067	2089	296	4854	2506	44.88	18	13.36	86.64
N	10	10	10	10	10	10	10	10	10